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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/759,384	01/16/2004	Jose Manuel Lopez Nieto	2429-1-031	6698

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EXAMINER	
SACKEY, EBENEZER O	
ART UNIT	PAPER NUMBER
1624	

DATE MAILED: 09/28/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/759,384	LOPEZ NIETO ET AL.	
	Examiner	Art Unit	
	EBENEZER SACKEY	1626	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☐ Responsive to communication(s) filed on _____.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-14* is/are pending in the application.

4a) Of the above claim(s) *11-14* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-10* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)

2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *7/14/04,10/22/04*.

4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .

5) ☐ Notice of Informal Patent Application

6) ☐ Other: _____.

DETAILED ACTION

Status of the Claims

Claims 1-14 are pending.

DETAILED ACTION

Election/Restrictions

Restriction to one of the following inventions is required under 35 U.S.C. 121:

I. Claims 1-10 are, drawn to ammoxidation catalysts, classified in class 502, subclass 102+.

II. Claim 11 is, drawn to oxidation of propane, classified in class 558, subclass 303+.

III. Claims 12-14 are, drawn to preparing acrylic acid and acrylonitrile and methacrylic acid, classified in class 562, 558, in various subclasses.

The inventions are distinct, each from the other because of the following reasons:

Inventions I and II-III are related as process of making and product made. The inventions are distinct if either or both of the following can be shown: (1) that the process as claimed can be used to make another and materially different product or (2) that the product as claimed can be made by another and materially different process (MPEP § 806.05(f)). In the instant case the product as claimed can be used in a materially different process such as shown in U.S.Patent number 5,380,933.

Groups II and III are drawn to two distinct processes resulting in two different products where there is no patentable co-action among the groups. Thus, a reference anticipating one member will not necessarily render obvious the other group.

Because these inventions are independent or distinct for the reasons given above and there would be a serious burden on the examiner if restriction is not required because the inventions have acquired a separate status in the art in view of their different classification, restriction for examination purposes as indicated is proper.

During a telephone conversation with J. David Smith on 09/12/06 a provisional election was made with traverse to prosecute the invention of Group I, claims1-10. Affirmation of this election must be made by applicant in replying to this Office action. Claims 11-14 are withdrawn from further consideration by the examiner, 37 CFR 1.142(b), as being drawn to a non-elected invention.

Applicant is reminded that upon the cancellation of claims to a non-elected invention, the inventorship must be amended in compliance with 37 CFR 1.48(b) if one or more of the currently named inventors is no longer an inventor of at least one claim remaining in the application. Any amendment of inventorship must be accompanied by a request under 37 CFR 1.48(b) and by the fee required under 37 CFR 1.17(i).

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1-10 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

It is not entirely clear if applicants are claiming the preparation of acrylic acid or acrylonitrile or a combination of acrylic acid and acrylonitrile. Clarification is required. Additionally, there is no antecedent basis for h, i, j, k and x since the empirical formula is not in claim 1.

Claim Rejections - 35 U.S.C. § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

2. The factual inquiries set forth in Graham v. John Deere Co., 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application

indicating obviousness or nonobviousness.

3. Claims 1-10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Takahashi et al., (U.S.Patent number 5,994,580).

Applicants claim a catalyst for selective oxidation and ammoxidation of alkanes and/or alkenes, for preparing acrylic acid and acrylonitrile and derivatives comprising employing the catalyst of empirical formula $MoTe_hV_iCu_jA_kO_x$. The said catalyst has an x-ray diffractogram with five intense diffraction lines corresponding to diffraction angles shown in claim 1.

Determination of the scope and content of the prior art (MPEP §2141.01)

Takahashi et al., teach a catalyst metal oxide for preparing acrylic acid from alkane comprising catalytically reacting propane with oxygen-containing gas to obtain the acrylic acid employing a catalyst oxide that embraces the instant catalyst. See the entire reference especially column 1, lines 31-51, column 2, lines 27-35.

Ascertainment of the difference between the prior art and the claims (MPEP §2141.02)

The difference between the instant invention and Takahashi et al., is that the instant invention requires the catalyst oxide to posses an x-ray diffraction angles of 2θ at 22.1+-0.4, 27.1+-0.4; etc., (claim 1). Takahashi et al., is silent on the diffraction angles of the catalyst. However, there is no evidence of record to distinguish the catalyst of Takahashi from the instant catalyst because applicants' catalyst is similar to that of Takahashi et al and thus, posses the diffraction lines corresponding to the instant angles. Note the reference teaches ratios of i, j and k, which overlaps with instant ratios of claims 3 and 4. Also note catalyst supports of claims 7, 8, 9 and 10 in column 4, lines 11-13 i.e., silica and silicon carbide etc. Thus, to the skilled artisan, the claimed diffraction angles and ratios are nothing more than the manipulation of process

parameters to improve yield and/or selectivity. Hence, modifying process conditions such as diffraction angles, ratios, supports percentages etc., are not a patentable modification absent a showing of criticality. *In re Aller,* 220 F .2d 454, 105 U.S.P.Q. 233 (C.C.P.A. 1955).

Finding of prima facie obviousness---rational and motivation (MPEP §2142-2143)

Thus, at the time of filing this application, one of ordinary skill in the art would have had a reasonable expectation of success in employing the catalyst of Takahashi et al., because Takahashi et al., teach that employing catalyst oxide embracing the instant formula is expected to be industrially advantageous in producing acrylic from of alkanes, see column 2, lines 18-26. The requisite motivation being the desire to prepare acrylic acid from alkanes. Thus, a slight difference in the catalyst empirical formula may serve to differentiate the process from under 35 U.S.C 102 but, does not serve to remove the relied upon reference from under 35 U.S.C 103. Therefore, at the time of filing this application, one of ordinary skill in the art in possession of Takahashi et al., would have had a reasonable expectation of success in practicing the instant invention absent a showing of unexpected results and/or properties.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to E. Sackey whose telephone number is (571) 272-0704. The examiner can normally be reached on Monday-Friday from 7:30 am to 4:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Joseph K. McKane, can be reached on (571) 272-0699. The fax phone

number for this Group is (571) 273-8300.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (571) 272-1600.

EOS
September 21, 2006

Joseph K. McKane
Supervisory Patent Examiner
Art Unit 1626, Group 1600
Technology Center 1